

CITY OF HOMEDALE, PWS #3370012
SOURCE WATER ASSESSMENT FINAL REPORT

DATE: June 13, 2001



State of Idaho
Department of Environmental Quality

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Executive Summary

Under the Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the act. This assessment is based on a land use inventory of the designated assessment area, sensitivity factors associated with the wells, and aquifer characteristics.

This report, *Source Water Assessment for the City of Homedale, Idaho*, describes the public drinking water system, the boundaries of the zones of water contribution, and the associated potential contaminant sources located within these boundaries. This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. **The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The City of Homedale drinking water system consists of four wells. The wells have all experienced microbial detections that exceed the current drinking water maximum contaminant levels. The wells have all experienced inorganic chemical detections below the maximum contaminant levels. Two of the wells (#1 and #4) have experienced volatile organic chemical detections also below maximum contaminant levels. According to the system operator, Well #2 (Tower) has been abandoned recently and is not to be included in this report.

This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For the City of Homedale, source water protection activities should focus on environmental education with the businesses, residents and with parties engaged in activities that may affect water quality within the vicinity. Practices aimed at reducing the leaching of chemicals from agricultural land within the designated source water areas should be focused. Most of the designated areas are outside the direct jurisdiction of the City of Homedale. Partnerships with state and local agencies and industry groups should be established and are critical to success. Due to the time involved with the movement of ground water, source water protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities for agriculture should be coordinated with the Idaho State Department of Agriculture, the Soil Conservation Commission and local Soil Conservation District, and the Natural Resources Conservation Service. Activities such as recreation should be coordinated with the Bureau of Land Management, the Idaho Fish & Game Dept. and other related agencies.

A community with a fully developed source water protection program will incorporate many strategies. For assistance in developing protection strategies, please contact your regional Idaho Department of Environmental Quality office or the Idaho Rural Water Association.

SOURCE WATER ASSESSMENT FOR THE CITY OF HOMEDALE, IDAHO

Section 1. Introduction - Basis for Assessment

The following sections contain information necessary to understand how and why this assessment was conducted. **It is important to review this information to understand what the ranking of this source means.** A map showing the delineated source water assessment area and the inventory of significant potential sources of contamination identified within that area are attached. The list of significant potential contaminant source categories and their rankings, used to develop this assessment, is also attached.

Level of Accuracy and Purpose of the Assessment

The Idaho Department of Environmental Quality (DEQ) is required by the U.S. Environmental Protection Agency (EPA) to assess the over 2,900 public drinking water sources in Idaho for their relative susceptibility to contaminants regulated by the Safe Drinking Water Act. This assessment is based on a land use inventory of the delineated assessment area, sensitivity factors associated with the wells, and aquifer characteristics. All assessments must be completed by May of 2003. The resources and time available to accomplish assessments are limited. Therefore, an in-depth, site-specific investigation to identify each significant potential source of contamination for every public water system is not possible. **This assessment should be used as a planning tool, taken into account with local knowledge and concerns, to develop and implement appropriate protection measures for this source. The results should not be used as an absolute measure of risk and they should not be used to undermine public confidence in the water system.**

The ultimate goal of this assessment is to provide data to local communities to develop a protection strategy for their drinking water supply system. The Idaho Department of Environmental Quality (DEQ) recognizes that pollution prevention activities generally require less time and money to implement than treating a public water supply system once it has been contaminated. DEQ encourages communities to balance resource protection with economic growth and development. The decision as to the amount and types of information necessary to develop a source water protection program should be determined by the local community based on its own needs and limitations. Wellhead or source water protection is one facet of a comprehensive growth plan, and it can complement ongoing local planning efforts.

Section 2. Conducting the Assessment

General Description of the Source Water Quality

The City of Homedale, Idaho serves a population of approximately 2,000 people. It is located approximately 16 miles southwest of Caldwell, Idaho and 9 miles northwest of Marsing, along the junction State Highway 19 and U.S. Highway 95, just south of the Snake River (Figure 1) in Owyhee County. The public drinking water system for the city consists of four wells. Well #2 (Tower Well) has been recently abandoned according to the system and is not included in this report.

The primary water quality issues currently facing the City of Homedale consists of microbial (total coliform), volatile organic chemical contamination, and the problems associated with managing the contamination. The microbial contamination could be related to the distribution system, not necessarily the source. The microbial contaminants have been detected in all four wells, which automatically places those wells in a high ranking in terms of susceptibility. Volatile organic compounds below maximum contaminant levels have been detected in two of the four wells, and even though the detection levels are below drinking water standards, the two wells automatically receive a high ranking of susceptibility in terms of volatile organic chemical compounds. The water system has also had detections of several inorganic compounds that have been below the maximum contaminant levels. Some of the inorganic compounds are likely naturally occurring.

Defining the Zones of Contribution - Delineation

The delineation process establishes the physical area around a well that will become the focal point of the assessment. The process includes mapping the boundaries of the zone of contribution into time of travel zones (zones indicating the number of years necessary for a particle of water to reach a well) for water in the aquifer. DEQ used a refined computer model approved by the EPA in determining the three-year (Zone 1B), six-year (Zone 2), and ten-year (Zone 3) time-of-travel (TOT) for water associated with the Homedale/Murphy and the Treasure Valley aquifer systems in the vicinity of the City of Homedale. The computer model used site-specific data, assimilated by DEQ from a variety of sources including the city and other local well logs.

Wells #1, #3 and #4 are obtaining water from a lower confined aquifer that is not restricted geographically by the aquifer system boundaries. Well #5 is believed to be obtaining water from an upper unconfined aquifer, with some possible influence from the lower aquifer, and therefore both the upper and lower aquifers penetrated by Well #5 were delineated. The delineated source water assessment area for the City of Homedale can best be described as five northeasterly-elongated areas encompassing roughly 195 acres in total for the lower aquifer.

Well #5 includes a west/north-west curvilinear area depicting the upper unconfined aquifer of the Homedale/Murphy aquifer system, consisting of approximately 48 acres. Figures 2 through 5 show the delineated areas with locations potential contaminant sources labeled for Wells #1, #3, #4 and #5 individually. Figure 6 illustrates the source water delineated areas for the four wells that consists of approximately 250 acres in total for both aquifers and indicates overlap between the wells. The actual data used by DEQ in determining the source water assessment delineation area is available upon request.

Identifying Potential Sources of Contamination

A potential source of contamination is defined as any facility or activity that stores, uses, or produces, as a product or by-product, the contaminants regulated under the Safe Drinking Water Act and has a sufficient likelihood of releasing such contaminants at levels that could pose a concern relative to drinking water sources. The goal of the inventory process is to locate and describe those facilities, land uses, and environmental conditions that are potential sources of ground water contamination. The locations of potential sources of contamination within the delineation areas were obtained by field surveys conducted by DEQ and from available databases.

The dominant land use outside the City of Homedale is irrigated agriculture.

Land use in the City of Homedale is urban consisting of light manufacturing, residential homes and small businesses. The homes in the city are connected to a sewer system, while some nearby operate with individual septic systems.

It is important to understand that a release may never occur from a potential source of contamination provided best management practices are used at the facility. Many potential sources of contamination are regulated at the federal level, state level, or both to reduce the risk of release. Therefore, when a business, facility, or property is identified as a potential contaminant source, this should not be interpreted to mean that this business, facility, or property is in violation of any local, state, or federal environmental law or regulation. What it does mean is that the potential for contamination exists due to the nature of the business, industry, or operation. There are a number of methods that water systems can use to work cooperatively with potential sources of contamination, such as educational visits and inspections of stored materials. Many owners of such facilities may not even be aware that they are located near a public water supply well.

Contaminant Source Inventory Process

A contaminant inventory of the study area was conducted during April of 2001. This involved identifying and documenting potential contaminant sources within the City of Homedale Source Water Assessment Area through the use of computer databases and Geographic Information System maps developed by DEQ.

Thirteen potential contaminant sources are located within the delineated source water area for Well #1 (Table 1). Five potential contaminant sources are located within the delineated source water area for Well #3 (Table 2). Fifteen potential contaminant sources are located within the delineated source water area for Well #5 (Table 3). The potential contaminant sources include fueling facilities, automotive repair/service, a hardware/building material center, a utility, and a funeral chapel. All potential contaminant sources are located near the well within the 3-year time of travel zone for Wells #1 and #3. One potential contaminant source is located within the 3-year time of travel zone for Well #5, four within the 6-year time of travel zone, and ten within the 10-year time of travel zone. No potential contaminant sources were located in the delineated source water areas for Well #4.

Contaminants of concern consist of volatile and synthetic organic and inorganic chemical compounds associated with fueling facilities, hardware/building materials and funeral facilities. Tables 1, 2, and 3 list the potential contaminants of concern, time of travel zones, and information source.

Table 1. City of Homedale, Well #1 Potential Contaminant Inventory

SITE #	Source Description ¹	TOT Zone ² (years)	Source of Information	Potential Contaminants ³
1	LUST	0-3	Database Search	VOC, SOC
2	LUST	0-3	Database Search	VOC, SOC
3	LUST	0-3	Database Search	VOC, SOC
4	LUST	0-3	Database Search	VOC, SOC
5	UST	0-3	Database Search	VOC, SOC
6	UST	0-3	Database Search	VOC, SOC
7	UST	0-3	Database Search	VOC, SOC, IOC
8	Automotive Supplies	0-3	Database Search	VOC, SOC, IOC
9	Automotive Repair/Service	0-3	Database Search	VOC, SOC, IOC
10	Automotive Repair/Service	0-3	Database Search	VOC, SOC, IOC
11	Hardware/Retail	0-3	Database Search	VOC, SOC, IOC
12	SARA/Fueling	0-3	Database Search	VOC, SOC
13	SARA/Fueling	0-3	Database Search	VOV, SOC

¹ UST = Underground petroleum storage tank, LUST = Leaking underground petroleum storage tank, SARA = Superfund Amendments and Reauthorization Act

² TOT = Time of travel (in years) for a potential contaminant to reach the wellhead

³ IOC = Inorganic chemical, VOC = Volatile organic chemical, SOC = Synthetic organic chemical, M = microbial

Table 2. City of Homedale, Well #3 Potential Contaminant Inventory

SITE #	Source Description ¹	TOT Zone ² (years)	Source of Information	Potential Contaminants ³
1	UST	0-3	Database Search	VOC, SOC
2	SARA	0-3	Database Search	VOC, SOC
3	SARA	0-3	Database Search	VOC, SOC
4	AST/Diesel	0-3	Database Search	VOC, SOC

¹ UST = Underground petroleum storage tank, AST = Above ground petroleum storage tank, SARA = Superfund Amendments and Reauthorization Facilities

² TOT = Time of travel (in years) for a potential contaminant to reach the wellhead

³ IOC = Inorganic chemical, VOC = Volatile organic chemical, SOC = Synthetic organic chemical, M = Microbial

Table 3. City of Homedale, Well #5 Potential Contaminant Inventory

SITE #	Source Description ¹	TOT Zone ² (years)	Source of Information	Potential Contaminants ³
1	Automotive Repair/Service	0-3	Database Search	VOC, SOC, IOC
2	Funeral Chapel	3-6	Database Search	SOC, IOC, M
3	Utility	3-6	Database Search	VOC, IOC
4	Contractor	3-6	Database Search	VOC, SOC, IOC
5	Hardware/Retail	3-6	Database Search	VOC, SOC
6	LUST	6-10	Database Search	VOC, SOC
7	LUST	6-10	Database Search	VOC, SOC
8	LUST	6-10	Database Search	VOC, SOC
9	UST	6-10	Database Search	VOC, SOC
10	UST	6-10	Database Search	VOC, SOC
11	Automotive Parts/Supplies	6-10	Database Search	VOC, SOC, IOC
12	Service Station	6-10	Database Search	VOC, SOC
13	Automotive Repair/Service	6-10	Database Search	VOC, SOC, IOC
14	SARA/Fuel-Service	6-10	Database Search	VOC, SOC

¹ UST = Underground petroleum storage tank, LUST = Leaking underground petroleum storage tank,

SARA = Superfund Amendments and Reauthorization Act

² TOT = Time of travel (in years) for a potential contaminant to reach the wellhead

³ IOC = Inorganic chemical, VOC = Volatile organic chemical, SOC = Synthetic organic chemical, M = microbial

Section 3. Susceptibility Analyses

The susceptibility of each well to contamination was ranked as high, moderate, or low risk according to the following considerations: hydrologic characteristics, physical integrity of the well, land use characteristics, and potentially significant contaminant sources. The susceptibility rankings are specific to a particular potential contaminant or category of contaminants. Therefore, a high susceptibility rating relative to one potential contaminant does not mean that the water system is at the same risk for all other potential contaminants. The relative ranking that is derived for each well is a qualitative, screening-level step that, in many cases, uses generalized assumptions and best professional judgement. The following summaries describe the rationale for the susceptibility ranking.

Hydrologic Sensitivity

Hydrologic sensitivity was moderate for Wells #1, #3, #4 and high for Well #5. This score is based on soil drainage, vadose zone characteristics (unsaturated sequence above the water table), depth to first ground water and the presence of an aquitard (impermeable layer above a confined aquifer).

Well Construction

Well construction directly affects the ability of the wells to protect the aquifer from contaminants. Lower scores imply a system that can better protect the water. The City of Homedale drinking water system consists of five wells that extract ground water for domestic and industrial uses. The well system construction scores are low in Wells #3 and #4, moderate for Well #1 and high for Well #5. (Table 4).

Wells #1, #3 and #4 of the City of Homedale water system are completed to depths ranging from 360 to over 500 feet below land surface, under a thick blue clay sequence. These wells draw water from a lower

confined aquifer below the clay. Normally the blue clay offers protection to the lower aquifer from surficial activities, however contaminants related to such activities have been detected in the wells.

Well #5 is cased to a depth of 21 feet below land surface, drilled to 215 feet in depth below land surface at the beginning of the lower confined aquifer, without a gravel pack nor well screens installed. It is unknown where the pump is set in the well. It is assumed that the well is drawing a majority of the water from the upper, unconfined aquifer, because the lower confined aquifer is barely penetrated. It is also assumed that the lower aquifer contributes a lesser amount of water for the well, based on the fact that the well is open below the casing, which ends at 21 feet below land surface. The presence of fluoride detected in 1979 for this well is indicative of the lower aquifer water chemistry.

The Idaho Department of Water Resources (IDWR) *Well Construction Standards Rules (1993)* require all public water systems (PWS's) to follow DEQ standards as well. IDAPA 58.01.08.550 requires that PWS's follow the *Recommended Standards for Water Works (1997)* during construction. Various aspects of the standards can be assessed from well logs. The City of Homedale drinking water Wells #3 and #5 do not conform to all current standards in terms of casing thickness. The thickness for 8-inch casing should be 0.322 inches. The casing thickness indicated on the well logs is 0.250 inches. The surface seal must extend 18 feet or into an impervious stratigraphic sequence above the water bearing zone according to IDAPA 58.01.08.550, and this is not the case in Wells #1 and #5.

Table 4. Selected Construction Characteristics of City of Homedale Wells.

Well #	Total Depth (ft.)	Screened Interval (ft. below ground surface)	Screen Below Blue Clay?	Surface Seal (ft.)	Gravel Pack Interval (ft.)
1	360	295-320	Yes	20*	260-360
3	360	292-333	Yes	22	2-343
4	533	456-458, 478-482	Yes	100	418-555
5	215	Casing from +1 – 21, no screens	No Screens	18**	None

*First Blue Clay Sequence at 50 feet below ground surface

** First Blue Clay Sequence at 125 feet below ground surface

Potential Contaminant Source and Land Use

Well #4 rated in the low category for all chemical classes in terms of potential contaminant source and land use. Wells #1, #3 and #5 rated in the moderate category for volatile and synthetic organic and inorganic chemical classes, and low for microbial chemicals in terms of potential contaminant sources and land use. Land use is predominantly urban with irrigated agriculture. County level herbicide use based on chemical sales is considered high while the county level nitrogen use is rated moderate. The area is also within an inorganic priority area for arsenic, however one detection of the constituent occurred in Well #4 in 1992, but was below maximum contaminant levels.

Final Susceptibility Ranking

In terms of the total susceptibility score, it can be seen from Table 5 that all five wells are high in susceptibility to microbial contamination due to detections. Wells #1 and #4 are high in susceptibility to volatile organic chemicals due to recent detections even though the detections are below maximum contaminant levels. All four wells have had detections of fluoride, an inorganic chemical compound below maximum contaminant levels. Nitrates appeared in Well #5 in 1979 and in Wells #1 and #4 in 1998. Other inorganic constituents such as barium and cadmium have been detected in Well #3 and #4 at below maximum contaminant levels. Chromium has been also detected in Well #3. Mercury and arsenic have appeared in Well #4. All of the inorganic chemical detections have been below maximum contaminant levels and may be naturally occurring.

Table 5. Summary of City of Homedale Susceptibility Evaluation

Well #	Susceptibility Scores ¹									
	Hydrologic Sensitivity	Contaminant Inventory				System Construction	Final Susceptibility Ranking			
		IOC	VOC	SOC	Microbial		IOC	VOC	SOC	Microbial
1	M	M	M	M	L	M	M	H*	M	H*
3	M	M	M	M	L	L	M	M	M	H*
4	M	L	L	L	L	L	L	H*	L	H*
5	M	M	M	M	L	M	M	M	M	H*

¹H = High Susceptibility, M = Moderate Susceptibility, Low Susceptibility

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical

²H* - Indicates source automatically scored as high susceptibility due to presence of either a VOC, SOC or microbial detected or an IOC above the maximum contaminant level in the tested drinking water

Susceptibility Summary

The City of Homedale drinking water system is currently threatened by microbial (in all four wells) and volatile organic (in Wells #1 and #4) chemical contamination due to recent detections. The detections of microbial contamination maybe related to the distribution system, not necessarily the source water. Treatment is important to avoid health problems. The system has experienced detections of inorganic compounds below maximum contaminant levels. Some of the inorganic compounds detected in the system are probably naturally occurring.

The wells are located in an inorganic priority area for arsenic, probably naturally occurring. The area is also within a high herbicide usage based on county level herbicide sales records. Well #1 is completed within a deeper confined aquifer that offers some protection from surficial contaminants, however, the annular seal in Well #1 does not extend into an impermeable layer. Well #3 is gravel packed from 2 to 343 feet below ground surface, which penetrates from the unsaturated zone into the upper aquifer and through the protective impermeable clay sequence into the lower aquifer. These factors can cause contaminants to migrate into the lower confined aquifer. The presence of the volatile organic and microbial chemical compounds generated from surficial activities being detected in the lower aquifer leads to speculation that cross contamination between the upper and lower aquifer maybe occurring.

Section 4. Options for Source Water Protection

The susceptibility assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what the susceptibility ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses that require education and surveillance, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

An effective source water protection program is tailored to the particular local source water protection area. A community with a fully developed source water protection program will incorporate many strategies. For the City of Homedale, source water protection activities should focus on environmental education with the business operators, residents and with parties engaged in activities that may affect water quality within the vicinity. Most of the delineated areas are outside the direct jurisdiction of the City of Homedale. Partnerships with state and local agricultural agencies and industry groups should be established and are critical to success. Due to the time involved with the movement of ground water, wellhead protection activities should be aimed at long-term management strategies even though these strategies may not yield results in the near term. Source water protection activities can be coordinated with the Idaho Department of Agriculture, the Idaho Department of Fish and Game, the U.S. Bureau of Land Management, and other federal, state and local agencies.

Assistance

Public water supplies and others may call the following IDEQ offices with questions about this assessment and to request assistance with developing and implementing a local protection plan. In addition, draft protection plans may be submitted to the IDEQ office for preliminary review and comments.

Boise Regional IDEQ Office (208) 373-0550

State IDEQ Office (208) 373-0502

Website: <http://www2.state.id.us/deq>

Water suppliers serving fewer than 10,000 persons may contact John Bokor, Idaho Rural Water Association, at 1-800-962-3257 for assistance with wellhead protection strategies.

References Cited

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Attachment A
City of Homedale
Susceptibility Analysis
Worksheet

The final scores for the susceptibility analysis were determined using the following formulas:

- 1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.2)
- 2) 2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Scoring:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

> 13 High Susceptibility

Ground Water Susceptibility Report

Public Water System Name :

Public Water System Number HOMEDALE CITY OF
3370012

Well# : WELL#1 CITY HAL

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1. System Construction		SCORE			
Drill Date	5/2/86				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1987			
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		2			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	YES	0			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		3			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	YES	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	8	8	8	8
(Score = # Sources X 2) 8 Points Maximum		8	8	8	8
Sources of Class II or III leacheable contaminants or	YES	8	8	8	
4 Points Maximum		4	4	4	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		14	12	12	8
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		0	0	0	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		1	1	1	0
Cumulative Potential Contaminant / Land Use Score		17	15	15	10
4. Final Susceptibility Source Score		8	8	8	9
5. Final Well Ranking		Moderate	High*	Moderate	High*

Ground Water Susceptibility Report

Public Water System Name :

HOMEDALE CITY OF

Well# : WELL #3 MEWHINN

Public Water System Number 3370012

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1. System Construction		SCORE			
	Drill Date	12/2/89			
	Driller Log Available	YES			
	Sanitary Survey (if yes, indicate date of last survey)	YES	1997		
	Well meets IDWR construction standards	NO	1		
	Wellhead and surface seal maintained	YES	0		
	Casing and annular seal extend to low permeability unit	YES	0		
	Highest production 100 feet below static water level	YES	0		
	Well located outside the 100 year flood plain	YES	0		
Total System Construction Score			1		
2. Hydrologic Sensitivity					
	Soils are poorly to moderately drained	NO	2		
	Vadose zone composed of gravel, fractured rock or unknown	YES	1		
	Depth to first water > 300 feet	NO	1		
	Aquitard present with > 50 feet cumulative thickness	YES	0		
Total Hydrologic Score			4		
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
	Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2
	Farm chemical use high	NO	0	0	2
	IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
	Contaminant sources present (Number of Sources)	YES	4	4	0
	(Score = # Sources X 2) 8 Points Maximum		8	8	0
	Sources of Class II or III leacheable contaminants or	YES	4	4	
	4 Points Maximum		4	4	
	Zone 1B contains or intercepts a Group 1 Area	YES	2	0	0
	Land use Zone 1B Less Than 25% Agricultural Land		0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B			14	12	0
Potential Contaminant / Land Use - ZONE II					
	Contaminant Sources Present	NO	0	0	0
	Sources of Class II or III leacheable contaminants or	NO	0	0	0
	Land Use Zone II Less than 25% Agricultural Land		0	0	
Potential Contaminant Source / Land Use Score - Zone II			0	0	0
Potential Contaminant / Land Use - ZONE III					
	Contaminant Source Present	NO	0	0	0
	Sources of Class II or III leacheable contaminants or	NO	0	0	0
	Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone III			0	0	0
Cumulative Potential Contaminant / Land Use Score			16	14	2
4. Final Susceptibility Source Score		8	8	8	6
5. Final Well Ranking		Moderate	Moderate	Moderate	High*

1. System Construction		SCORE			
Drill Date	9/25/79				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1997			
Well meets IDWR construction standards	YES	0			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	YES	0			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		0			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	YES	0			
Total Hydrologic Score		4			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	YES	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	NO	0	0	0	0
(Score = # Sources X 2) 8 Points Maximum		0	0	0	0
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
4 Points Maximum		0	0	0	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		2	0	0	0
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Land Use Zone II	25 to 50% Irrigated Agricultural Land	1	1	1	
Potential Contaminant Source / Land Use Score - Zone II		1	1	1	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	NO	0	0	0	
Sources of Class II or III leacheable contaminants or	NO	0	0	0	
Is there irrigated agricultural lands that occupy > 50% of	YES	1	1	1	
Total Potential Contaminant Source / Land Use Score - Zone III		1	1	1	0
Cumulative Potential Contaminant / Land Use Score		6	4	4	2
4. Final Susceptibility Source Score		5	5	5	5
5. Final Well Ranking		Low	High*	Low	High*

1. System Construction		SCORE			
Drill Date	5/8/72				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	1997			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	NO	2			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		4			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	NO	2			
Vadose zone composed of gravel, fractured rock or unknown	YES	1			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		6			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	URBAN/COMMERCIAL	2	2	2	2
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	YES	NO	NO	NO	YES
Total Potential Contaminant Source/Land Use Score - Zone 1A		2	2	2	2
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	1	1	1	0
(Score = # Sources X 2) 8 Points Maximum		2	2	2	0
Sources of Class II or III leacheable contaminants or	YES	1	0	0	
4 Points Maximum		1	0	0	
Zone 1B contains or intercepts a Group 1 Area	YES	2	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		5	2	2	0
Potential Contaminant / Land Use - ZONE II					
Contaminant Sources Present	YES	2	2	2	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Land Use Zone II	Less than 25% Agricultural Land	0	0	0	
Potential Contaminant Source / Land Use Score - Zone II		3	3	3	0
Potential Contaminant / Land Use - ZONE III					
Contaminant Source Present	YES	1	1	1	
Sources of Class II or III leacheable contaminants or	YES	1	1	1	
Is there irrigated agricultural lands that occupy > 50% of	NO	0	0	0	
Total Potential Contaminant Source / Land Use Score - Zone III		2	2	2	0
Cumulative Potential Contaminant / Land Use Score		12	9	9	2
4. Final Susceptibility Source Score		12	12	12	11
5. Final Well Ranking		Moderate	Moderate	Moderate	High*

POTENTIAL CONTAMINANT INVENTORY

LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as Superfund is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (IDEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by IDEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water